

Name: _____

at1110paper__practice__test (v2)

1. Expand the following expression into standard form.

$$(2x + 3)(4x + 9)$$

$$8x^2 + 18x + 12x + 27$$

$$8x^2 + 30x + 27$$

2. Factor the expression.

$$x^2 + 4x - 12$$

$$(x - 2)(x + 6)$$

3. Solve the equation.

$$6x^2 + 24x + 45 = 4x^2 + 3x + 5$$

$$2x^2 + 21x + 40 = 0$$

$$(2x + 5)(x + 8) = 0$$

$$x = \frac{-5}{2} \quad x = -8$$

4. Factor the expression.

$$25x^2 - 49$$

$$(5x - 7)(5x + 7)$$

5. Solve the equation.

$$(3x + 4)(2x + 7) = 0$$

$$x = \frac{-4}{3} \quad x = \frac{-7}{2}$$

6. Solve the equation with factoring by grouping.

$$10x^2 + 15x + 12x + 18 = 0$$

$$(5x + 6)(2x + 3) = 0$$
$$x = \frac{-6}{5} \quad x = \frac{-3}{2}$$

7. Expand the following expression into standard form.

$$(2x - 7)(2x + 7)$$

$$4x^2 + 14x - 14x - 49$$
$$4x^2 - 49$$

8. Expand the following expression into standard form.

$$(6x + 7)^2$$

$$36x^2 + 42x + 42x + 49$$
$$36x^2 + 84x + 49$$